

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL042125\
 Data File : VL042401.D
 Acq On : 21 Apr 2025 12:51
 Operator : SY/MD
 Sample : Q1801-02 4X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SS3

Quant Time: Apr 22 02:53:05 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL041725AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Apr 18 02:14:00 2025
 Response via : Initial Calibration

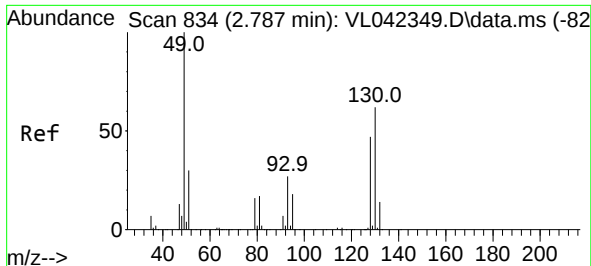
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	122041	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.958	114	337832	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.878	117	286610	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.374	95	248812	10.564	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	= 105.600%	
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	2467	0.114	ppbv	97
3) Chlorodifluoromethane	1.473	51	2014	0.098	ppbv	92
4) Chloromethane	1.531	50	913	0.107	ppbv #	79
7) Chloroethane	1.709	64	132	0.039	ppbv #	78
9) Propene	1.486	41	1848	0.198	ppbv	88
10) Heptane	4.978	43	925	0.035	ppbv #	27
11) Trichlorofluoromethane	1.877	101	1373	0.067	ppbv #	78
13) Ethanol	1.722	45	11547	7.769	ppbv #	24
15) Acetone	1.835	43	29636	1.483	ppbv	97
16) 1,3-Butadiene	1.599	39	3089	0.323	ppbv #	23
17) tert-Butyl alcohol	2.042	59	3820	0.154	ppbv #	71
19) Isopropyl Alcohol	1.887	45	9166	0.826	ppbv #	17
20) Methylene Chloride	2.059	84	1438	0.184	ppbv #	86
23) Vinyl Acetate	2.463	43	6182	0.764	ppbv #	74
25) Ethyl Acetate	2.826	43	13889	0.282	ppbv #	80
26) Hexane	2.822	57	20551	1.031	ppbv #	24
27) Carbon Disulfide	2.149	76	3554	0.167	ppbv #	1
28) Methyl tert-Butyl Ether	2.444	73	453	0.035	ppbv #	1
29) Chloroform	2.848	83	3530	0.125	ppbv #	67
34) 2-Butanone	2.563	43	3442	0.129	ppbv #	77
36) Benzene	3.654	78	1426	0.039	ppbv #	44
39) 1,2-Dichloropropane	3.955	63	94441	6.955	ppbv #	24
41) Tetrahydrofuran	3.068	42	653	0.042	ppbv #	83
52) Tetrachloroethene	8.221	164	14958	1.062	ppbv	89
53) Toluene	6.933	91	9102	0.208	ppbv #	38
59) m/p-Xylene	9.551	91	3030	0.066	ppbv #	1
60) o-Xylene	9.962	91	5177	0.112	ppbv	95
66) Benzyl Chloride	11.726	91	309	0.045	ppbv #	1
67) sec-Butylbenzene	12.044	105	4216	0.049	ppbv	94
69) p-Isopropyltoluene	11.927	119	3226	0.043	ppbv	95
72) 4-Ethyltoluene	11.124	105	2805	0.050	ppbv #	83
73) 1,3,5-Trimethylbenzene	11.202	105	2911	0.059	ppbv #	69
74) 1,2,4-Trimethylbenzene	11.535	105	13013	0.224	ppbv #	63

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quant Time: Apr 22 02:53:05 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL041725AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Fri Apr 18 02:14:00 2025
Response via : Initial Calibration

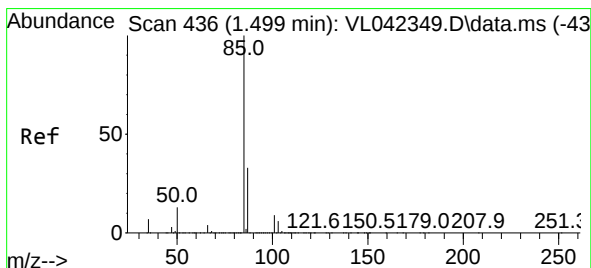
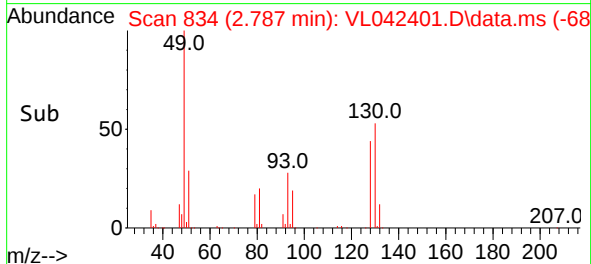
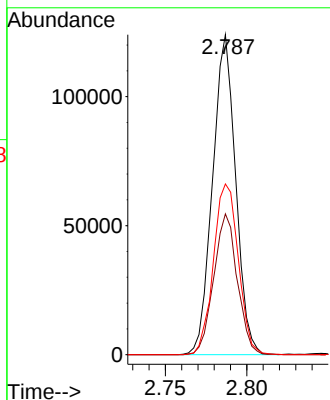
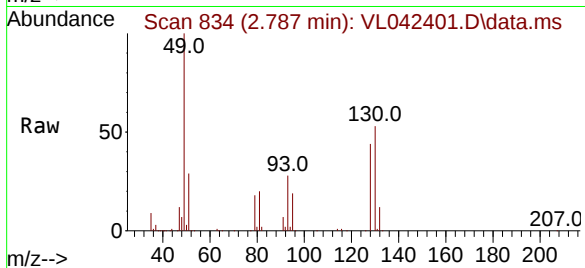




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

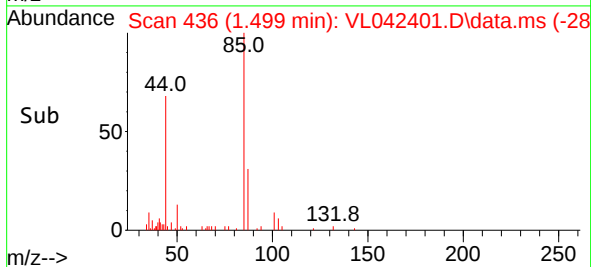
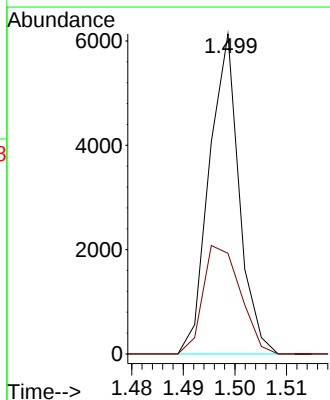
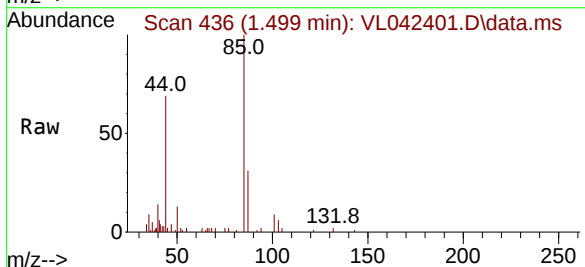
Instrument :
MSVOA_L
ClientSampleId :
SS3

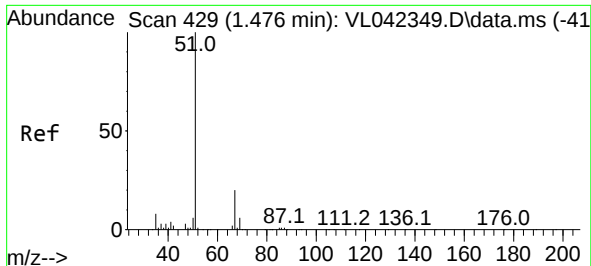
Tgt Ion: 49 Resp: 122041
Ion Ratio Lower Upper
49 100
128 44.9 22.8 68.4
130 57.5 29.3 88.0



#2
Dichlorodifluoromethane
Concen: 0.114 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 85 Resp: 2467
Ion Ratio Lower Upper
85 100
87 31.5 26.6 39.8

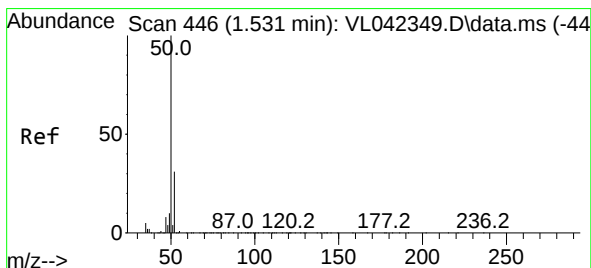
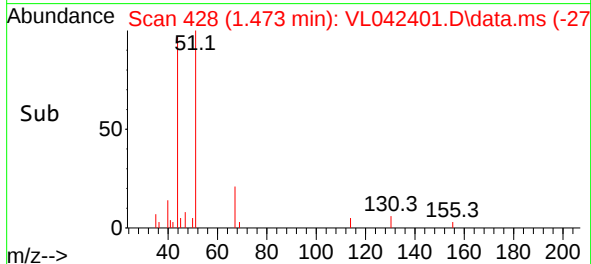
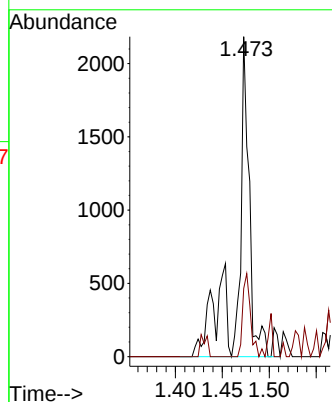
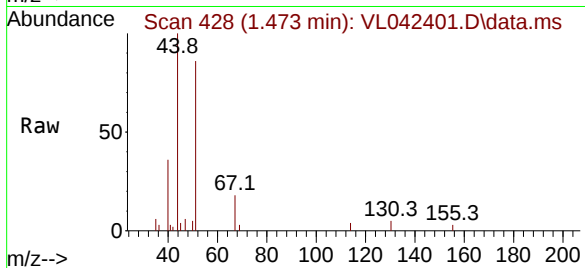




#3
Chlorodifluoromethane
Concen: 0.098 ppbv
RT: 1.473 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

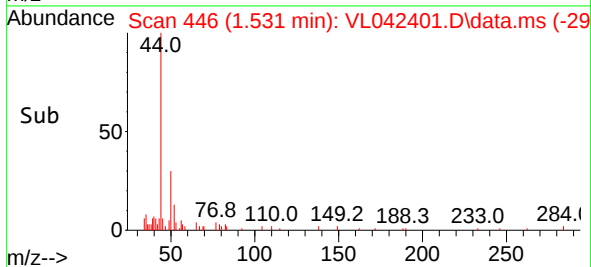
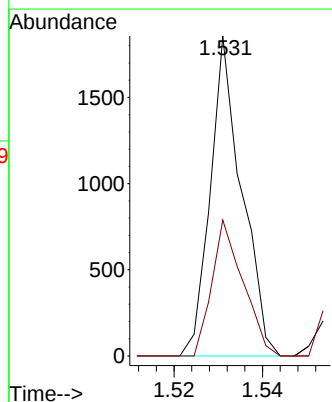
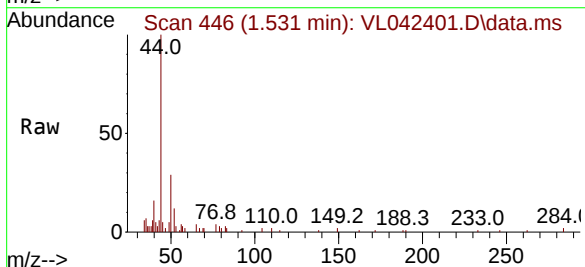
Instrument :
MSVOA_L
ClientSampleId :
SS3

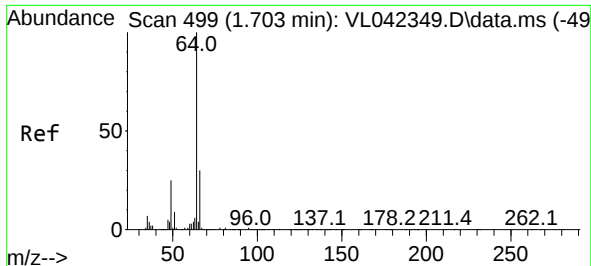
Tgt Ion: 51 Resp: 2014
Ion Ratio Lower Upper
51 100
67 16.4 16.2 24.4



#4
Chloromethane
Concen: 0.107 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 50 Resp: 913
Ion Ratio Lower Upper
50 100
52 42.5 24.7 37.1#

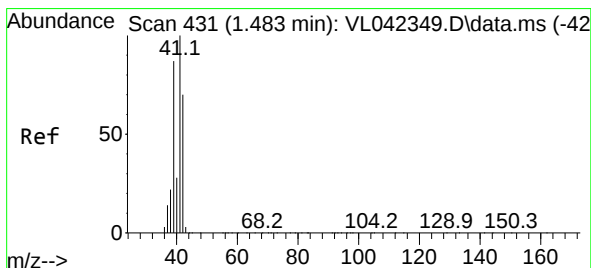
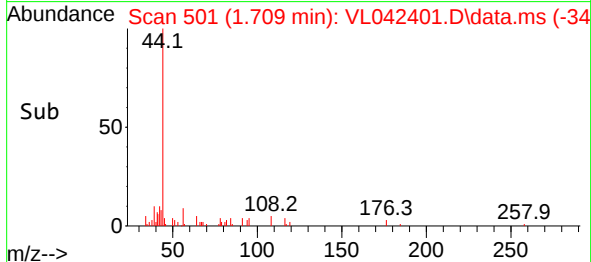
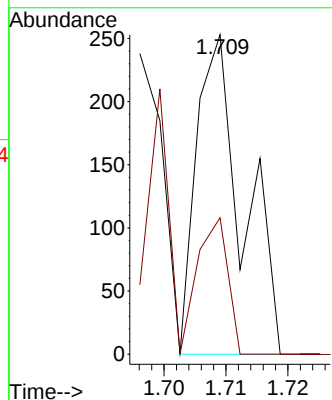
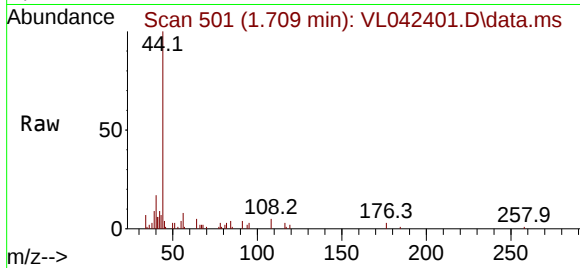




#7
Chloroethane
Concen: 0.039 ppbv
RT: 1.709 min Scan# 501
Delta R.T. 0.006 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

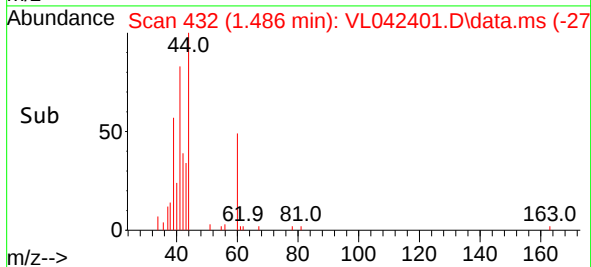
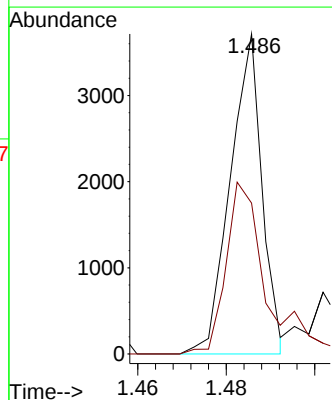
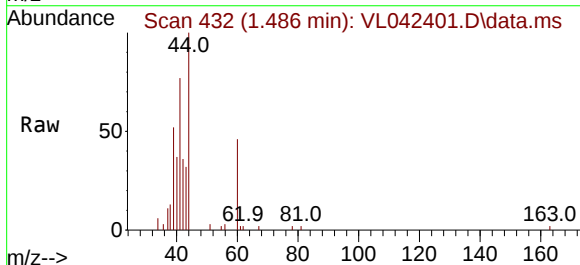
Instrument :
MSVOA_L
ClientSampleId :
SS3

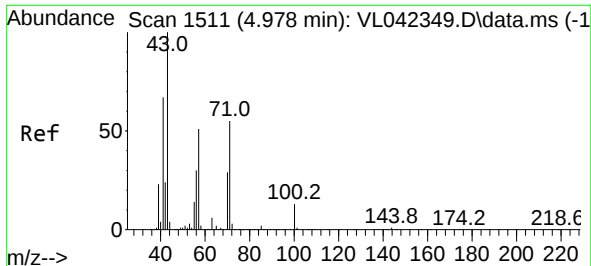
Tgt Ion: 64 Resp: 132
Ion Ratio Lower Upper
64 100
66 42.7 24.6 37.0#



#9
Propene
Concen: 0.198 ppbv
RT: 1.486 min Scan# 432
Delta R.T. 0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 41 Resp: 1848
Ion Ratio Lower Upper
41 100
42 80.0 56.2 84.4

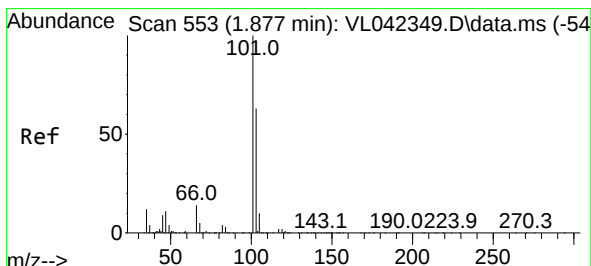
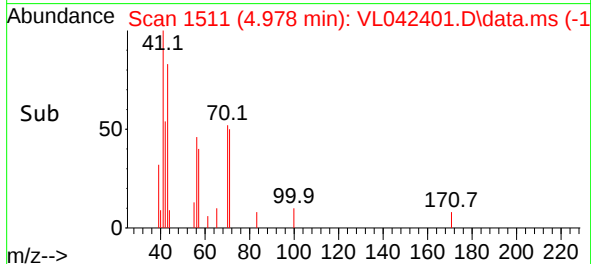
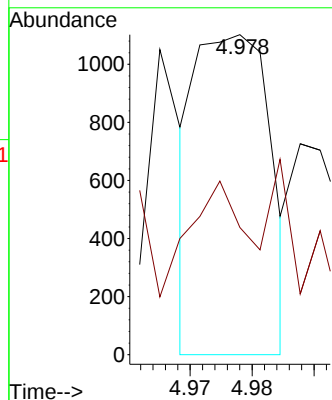
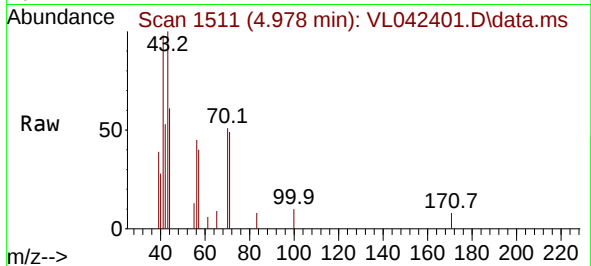




#10
Heptane
Concen: 0.035 ppbv
RT: 4.978 min Scan# 11
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

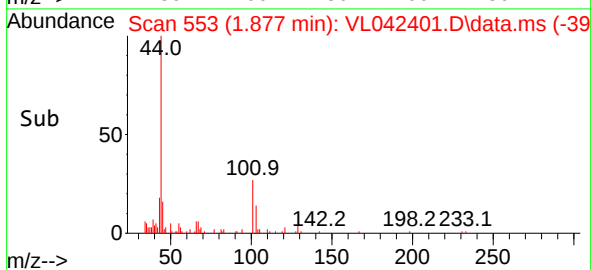
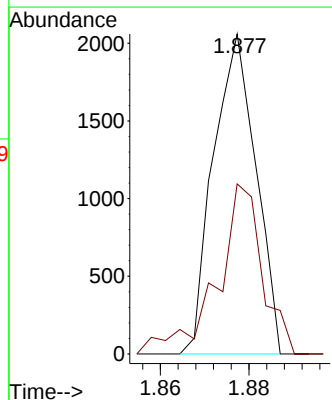
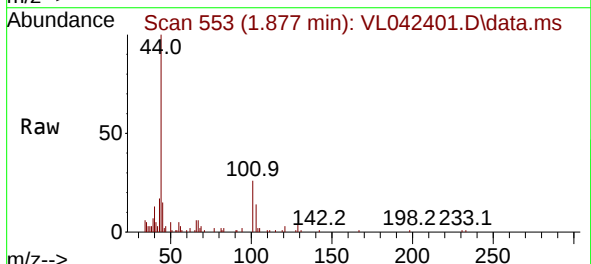
Instrument :
MSVOA_L
ClientSampleId :
SS3

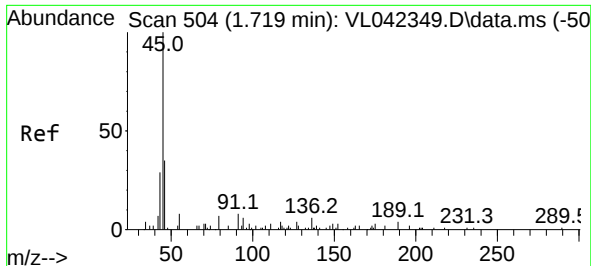
Tgt Ion: 43 Resp: 925
Ion Ratio Lower Upper
43 100
57 0.0 39.9 59.9#



#11
Trichlorofluoromethane
Concen: 0.067 ppbv
RT: 1.877 min Scan# 553
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 101 Resp: 1373
Ion Ratio Lower Upper
101 100
103 45.5 50.1 75.1#

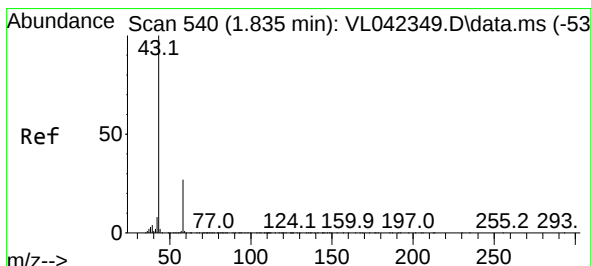
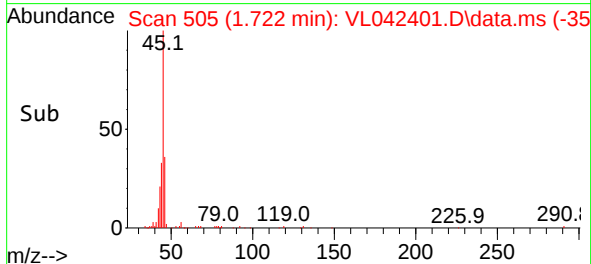
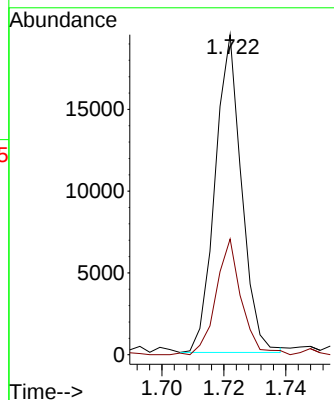
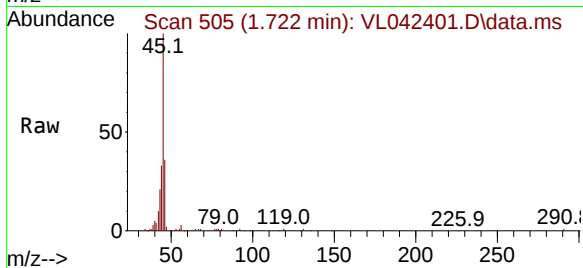




#13
Ethanol
Concen: 7.769 ppbv
RT: 1.722 min Scan# 505
Delta R.T. 0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

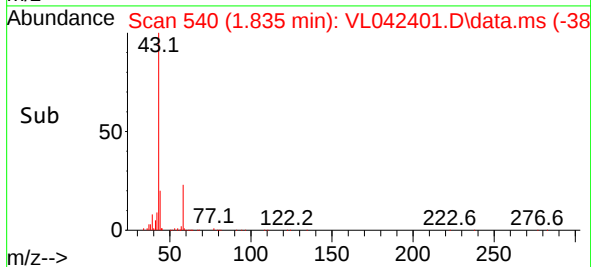
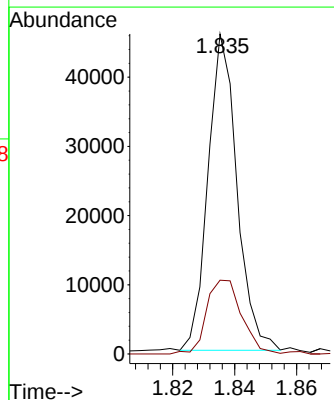
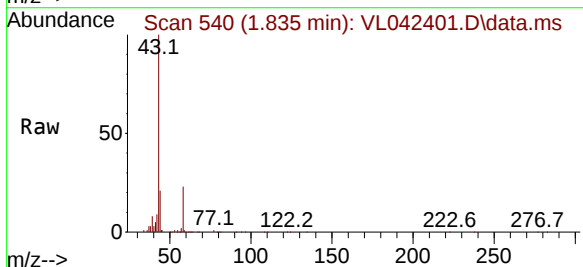
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MSVOA_L
ClientSampleId :
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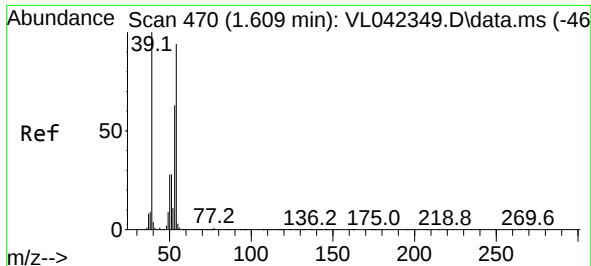
Tgt Ion: 45 Resp: 11547
Ion Ratio Lower Upper
45 100
46 0.0 21.9 87.7#



#15
Acetone
Concen: 1.483 ppbv
RT: 1.835 min Scan# 540
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 43 Resp: 29636
Ion Ratio Lower Upper
43 100
58 29.8 22.4 33.6





#16

1,3-Butadiene

Concen: 0.323 ppbv

RT: 1.599 min Scan# 41

Delta R.T. -0.010 min

Lab File: VL042401.D

Acq: 21 Apr 2025 12:51

Instrument :

MSVOA_L

ClientSampleId :

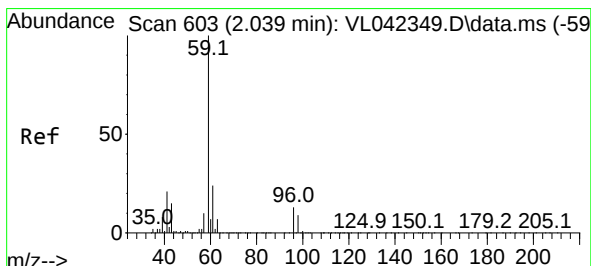
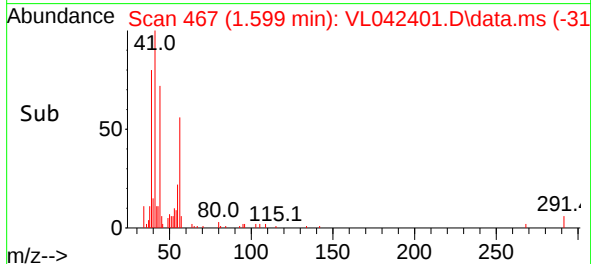
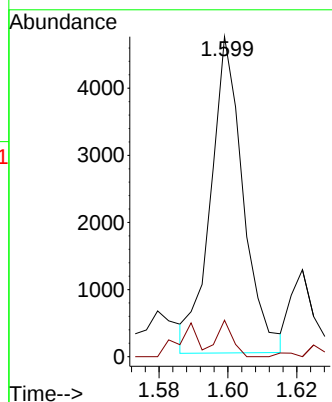
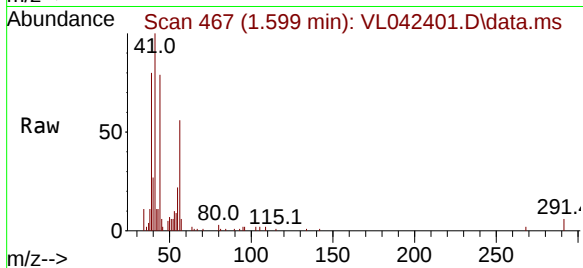
SS3

Tgt Ion: 39 Resp: 3089

Ion Ratio Lower Upper

39 100

54 12.2 64.9 97.3#



#17

tert-Butyl alcohol

Concen: 0.154 ppbv

RT: 2.042 min Scan# 604

Delta R.T. 0.003 min

Lab File: VL042401.D

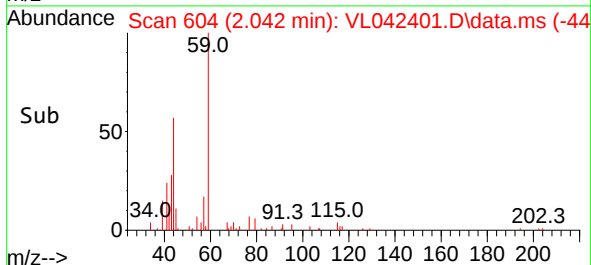
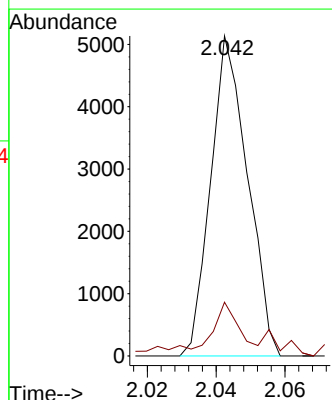
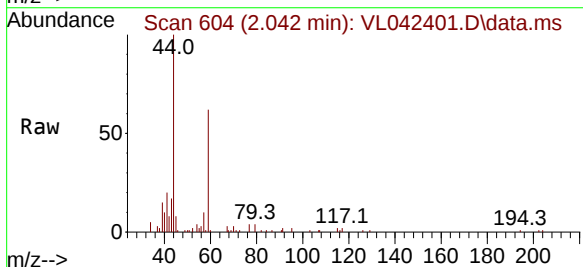
Acq: 21 Apr 2025 12:51

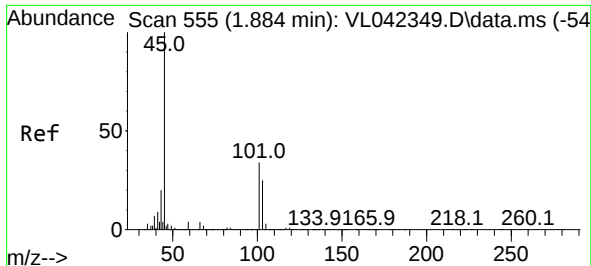
Tgt Ion: 59 Resp: 3820

Ion Ratio Lower Upper

59 100

57 22.0 8.7 13.1#

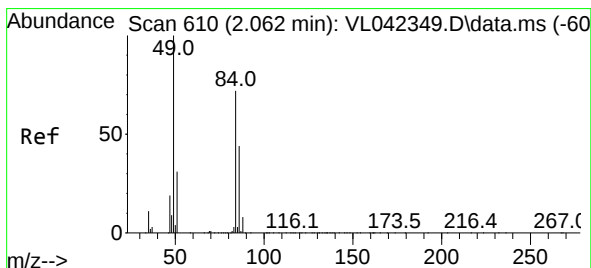
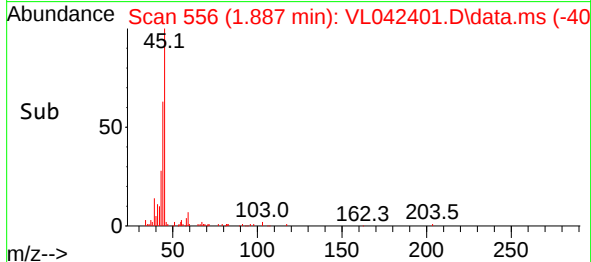
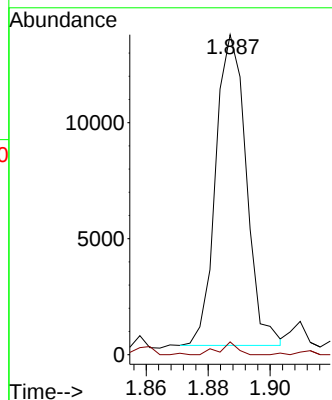
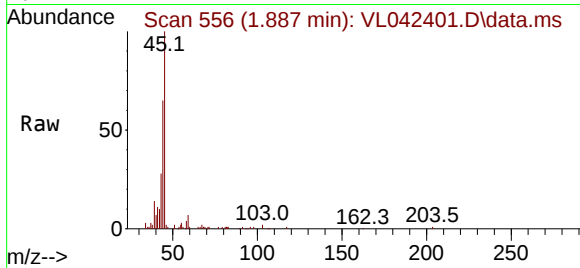




#19
Isopropyl Alcohol
Concen: 0.826 ppbv
RT: 1.887 min Scan# 51
Delta R.T. 0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

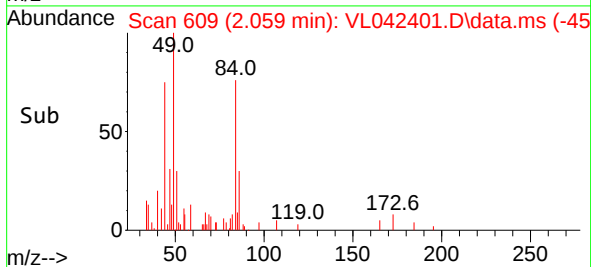
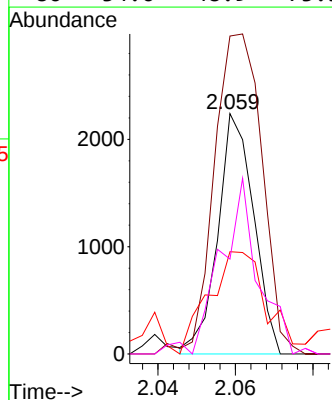
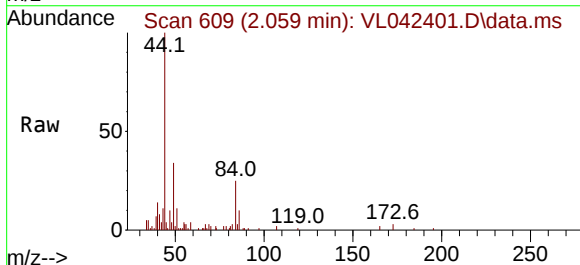
Instrument :
MSVOA_L
ClientSampleId :
SS3

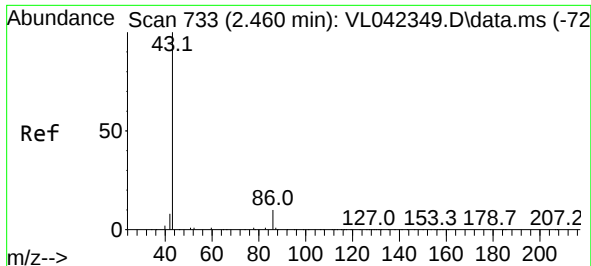
Tgt Ion: 45 Resp: 9166
Ion Ratio Lower Upper
45 100
58 96.2 34.5 51.7#



#20
Methylene Chloride
Concen: 0.184 ppbv
RT: 2.059 min Scan# 609
Delta R.T. -0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 84 Resp: 1438
Ion Ratio Lower Upper
84 100
49 130.0 111.6 167.4
51 42.5 35.1 52.7
86 34.6 48.9 73.3#

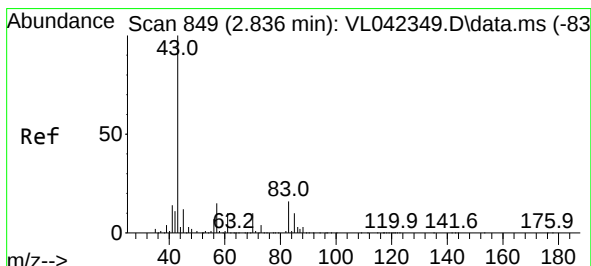
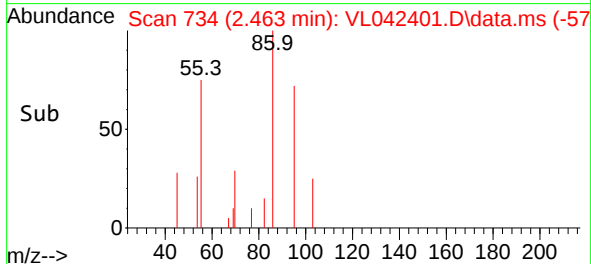
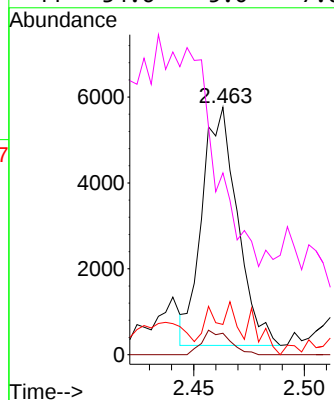
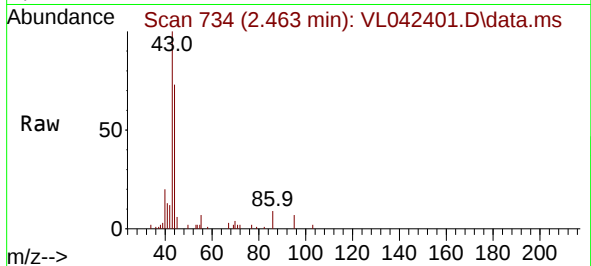




#23
 Vinyl Acetate
 Concen: 0.764 ppbv
 RT: 2.463 min Scan# 71
 Delta R.T. 0.003 min
 Lab File: VL042401.D
 Acq: 21 Apr 2025 12:51

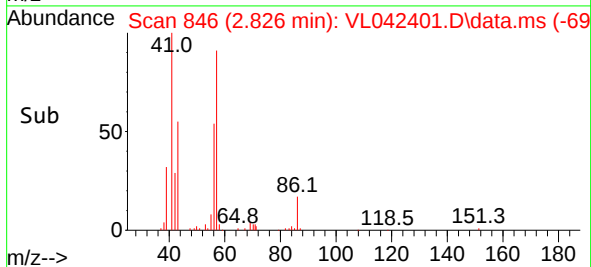
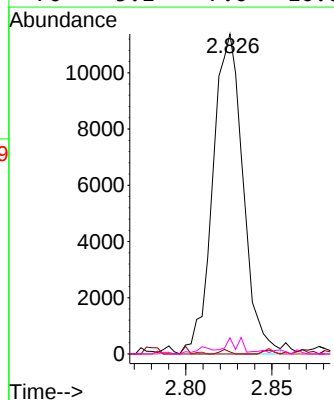
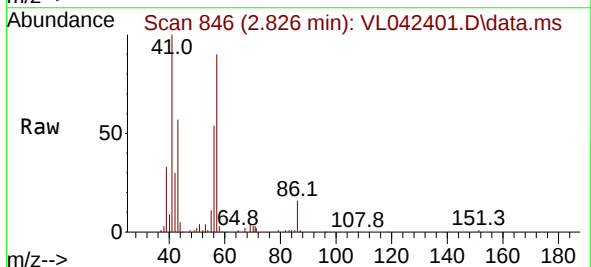
Instrument :
 MSVOA_L
 ClientSampleId :
 SS3

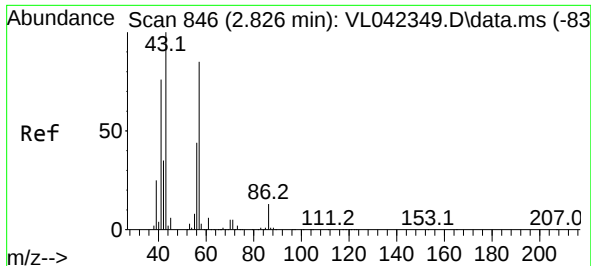
Tgt Ion:	43	Resp:	6182
Ion	Ratio	Lower	Upper
43	100		
86	9.0	6.5	9.7
42	12.7	7.8	11.8#
44	34.6	5.0	7.6#



#25
 Ethyl Acetate
 Concen: 0.282 ppbv
 RT: 2.826 min Scan# 846
 Delta R.T. -0.010 min
 Lab File: VL042401.D
 Acq: 21 Apr 2025 12:51

Tgt Ion:	43	Resp:	13889
Ion	Ratio	Lower	Upper
43	100		
45	1.4	8.3	12.5#
61	0.5	7.3	10.9#
70	5.1	7.0	10.6#

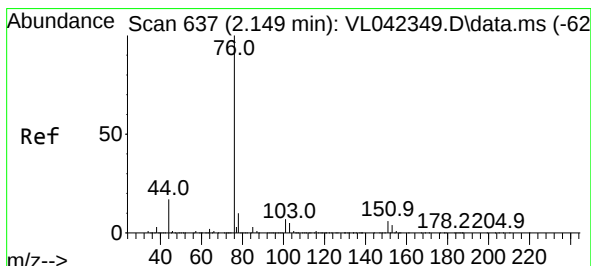
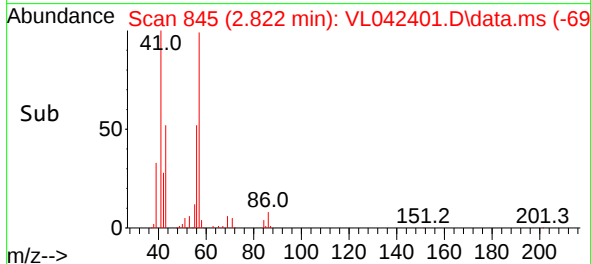
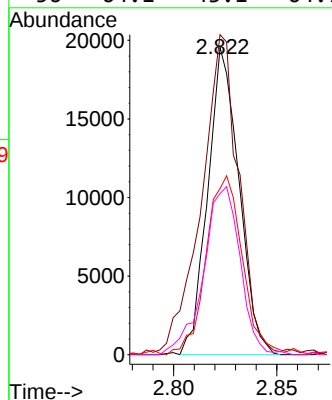
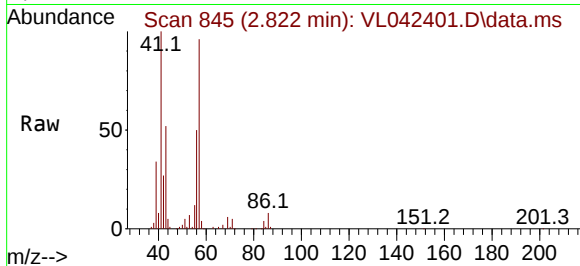




#26
Hexane
Concen: 1.031 ppbv
RT: 2.822 min Scan# 846
Delta R.T. -0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

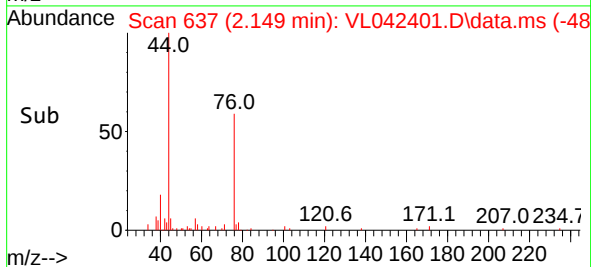
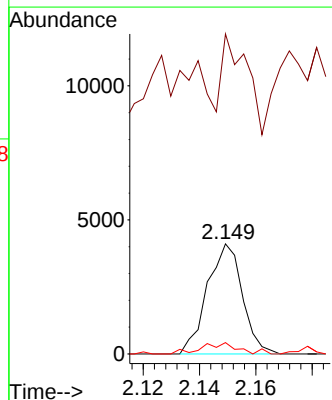
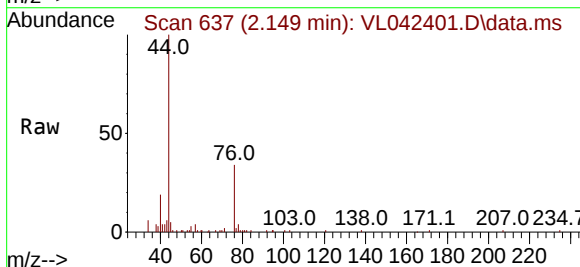
Instrument :
MSVOA_L
ClientSampleId :
SS3

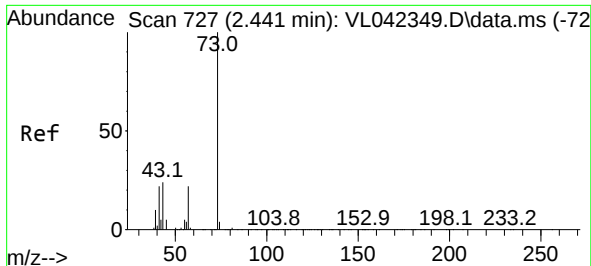
Tgt Ion: 57 Resp: 20551
Ion Ratio Lower Upper
57 100
41 126.8 77.9 116.9#
43 70.4 208.4 312.6#
56 64.1 43.1 64.7



#27
Carbon Disulfide
Concen: 0.167 ppbv
RT: 2.149 min Scan# 637
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 76 Resp: 3554
Ion Ratio Lower Upper
76 100
44 448.1 15.5 23.3#
78 10.7 9.3 13.9

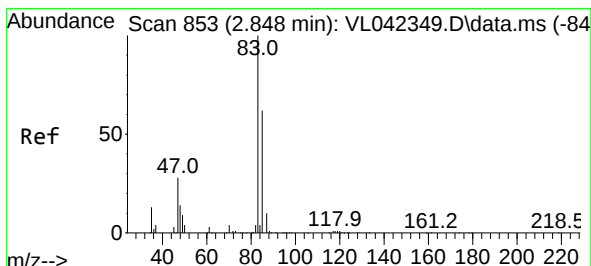
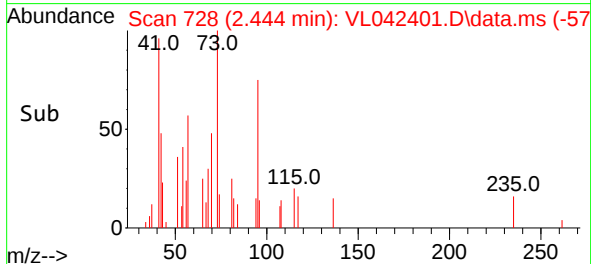
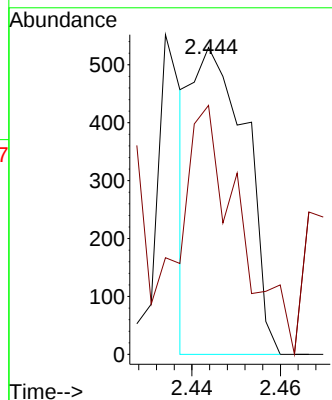
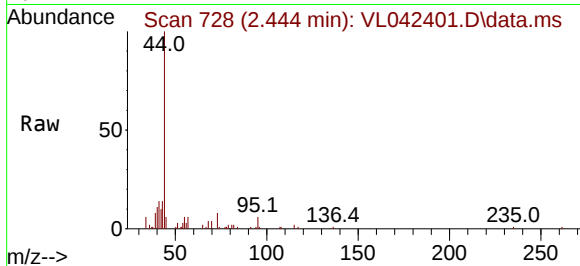




#28
Methyl tert-Butyl Ether
Concen: 0.035 ppbv
RT: 2.444 min Scan# 71
Delta R.T. 0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

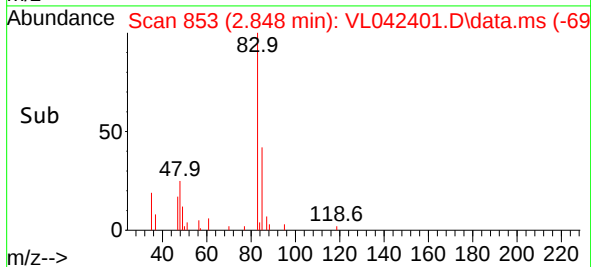
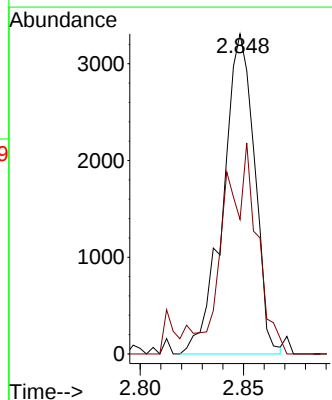
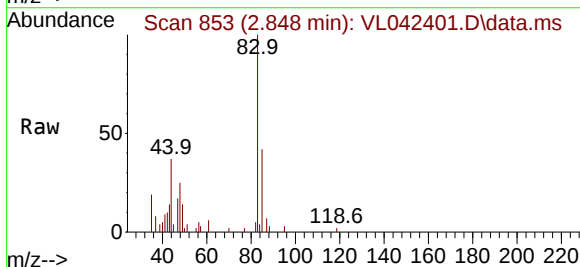
Instrument :
MSVOA_L
ClientSampleId :
SS3

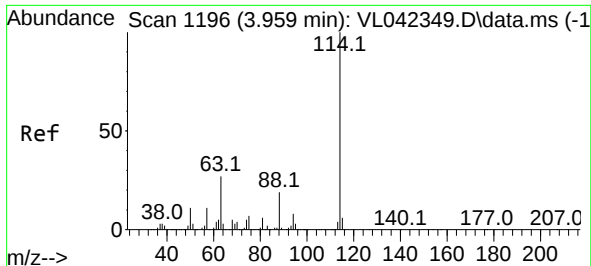
Tgt Ion: 73 Resp: 453
Ion Ratio Lower Upper
73 100
57 191.2 21.3 31.9#



#29
Chloroform
Concen: 0.125 ppbv
RT: 2.848 min Scan# 853
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 83 Resp: 3530
Ion Ratio Lower Upper
83 100
85 37.3 50.0 75.0#

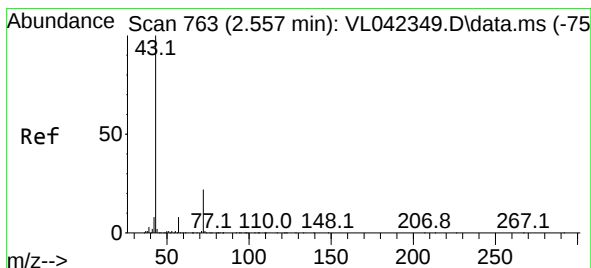
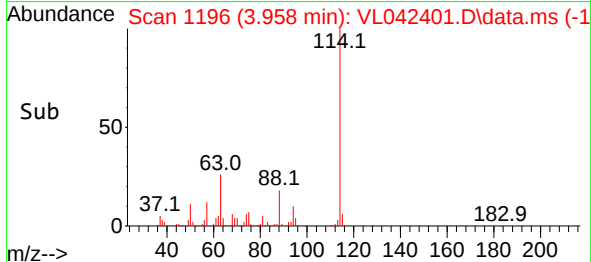
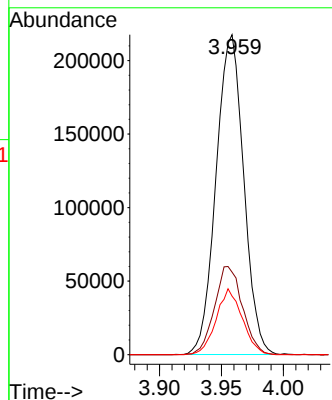
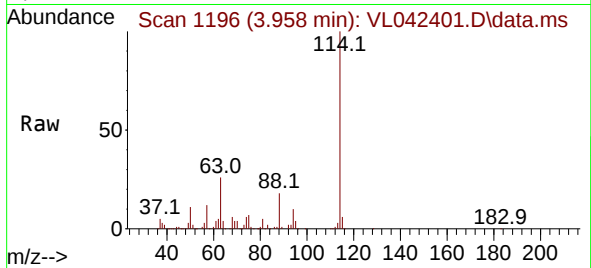




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 3.958 min Scan# 1196
 Delta R.T. -0.000 min
 Lab File: VL042401.D
 Acq: 21 Apr 2025 12:51

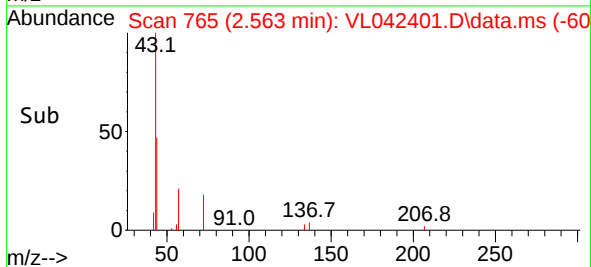
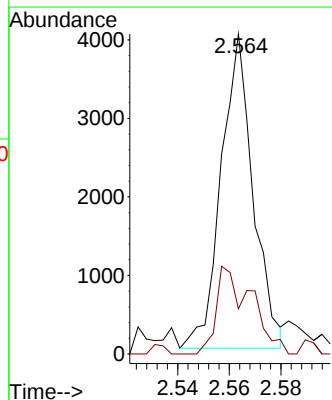
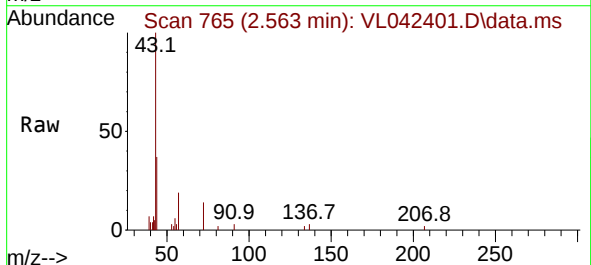
Instrument :
 MSVOA_L
 ClientSampleId :
 SS3

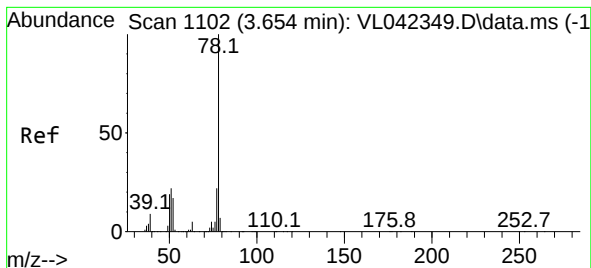
Tgt Ion:114 Resp: 337832
 Ion Ratio Lower Upper
 114 100
 63 28.0 21.8 32.6
 88 19.5 15.5 23.3



#34
 2-Butanone
 Concen: 0.129 ppbv
 RT: 2.563 min Scan# 765
 Delta R.T. 0.006 min
 Lab File: VL042401.D
 Acq: 21 Apr 2025 12:51

Tgt Ion: 43 Resp: 3442
 Ion Ratio Lower Upper
 43 100
 72 33.6 18.2 27.2#





#36

Benzene

Concen: 0.039 ppbv

RT: 3.654 min Scan# 1102

Delta R.T. -0.000 min

Lab File: VL042401.D

Acq: 21 Apr 2025 12:51

Instrument :

MSVOA_L

ClientSampleId :

SS3

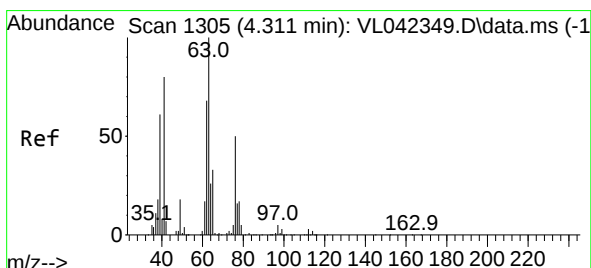
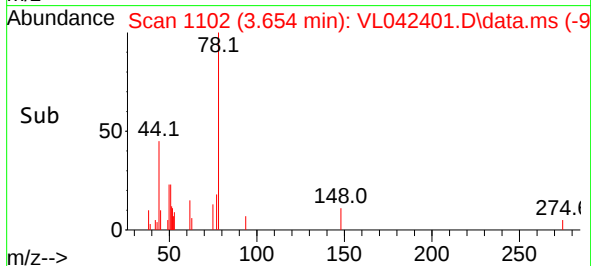
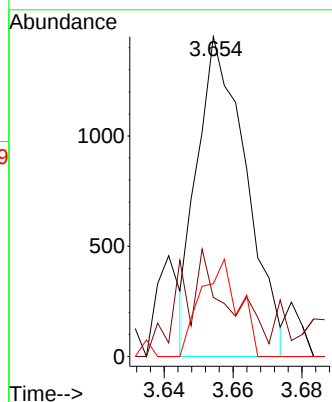
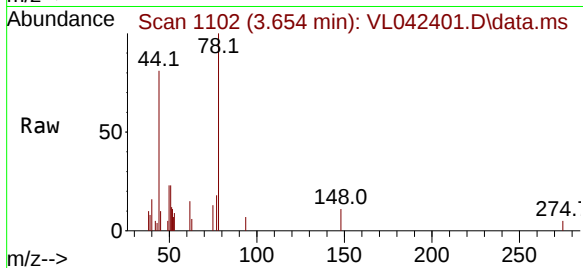
Tgt Ion: 78 Resp: 1426

Ion Ratio Lower Upper

78 100

77 0.9 17.4 26.0#

50 50.8 15.5 23.3#



#39

1,2-Dichloropropane

Concen: 6.955 ppbv

RT: 3.955 min Scan# 1195

Delta R.T. -0.356 min

Lab File: VL042401.D

Acq: 21 Apr 2025 12:51

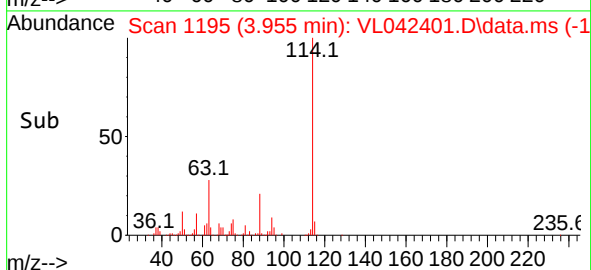
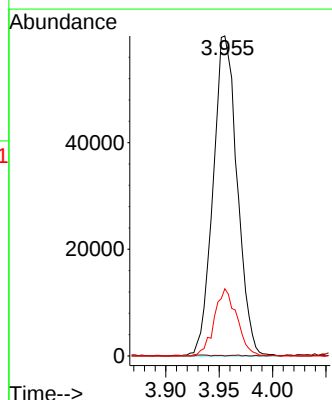
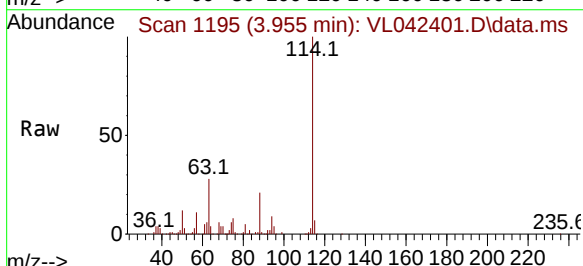
Tgt Ion: 63 Resp: 94441

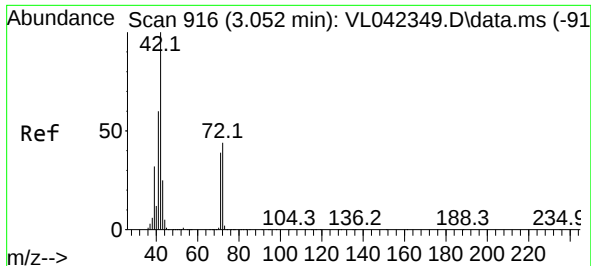
Ion Ratio Lower Upper

63 100

41 0.0 64.2 96.2#

62 21.0 54.3 81.5#





#41

Tetrahydrofuran

Concen: 0.042 ppbv

RT: 3.068 min Scan# 916

Delta R.T. 0.016 min

Lab File: VL042401.D

Acq: 21 Apr 2025 12:51

Instrument :

MSVOA_L

ClientSampleId :

SS3

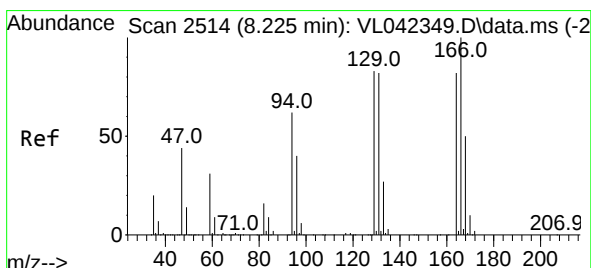
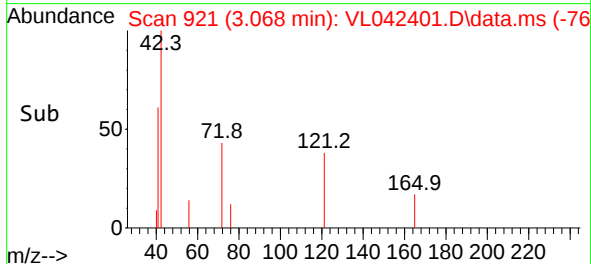
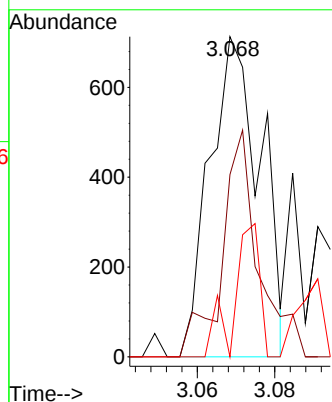
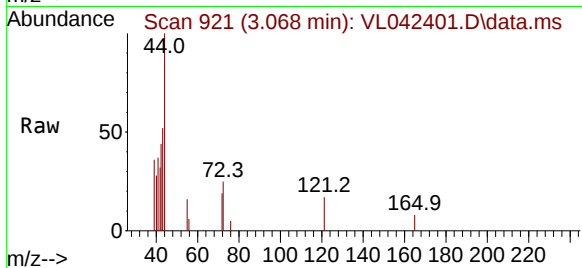
Tgt Ion: 42 Resp: 653

Ion Ratio Lower Upper

42 100

72 50.5 32.3 48.5#

71 28.6 31.4 47.2#



#52

Tetrachloroethene

Concen: 1.062 ppbv

RT: 8.221 min Scan# 2513

Delta R.T. -0.003 min

Lab File: VL042401.D

Acq: 21 Apr 2025 12:51

Tgt Ion: 164 Resp: 14958

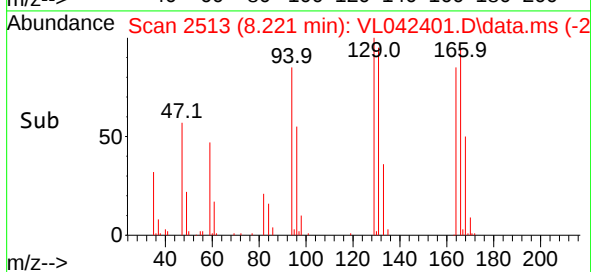
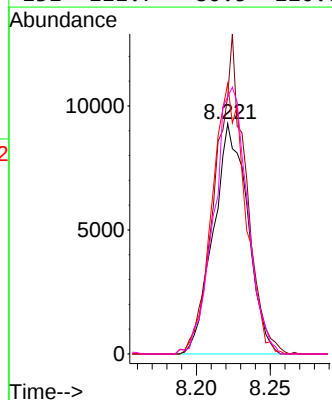
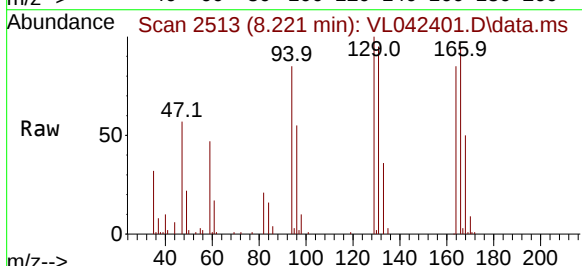
Ion Ratio Lower Upper

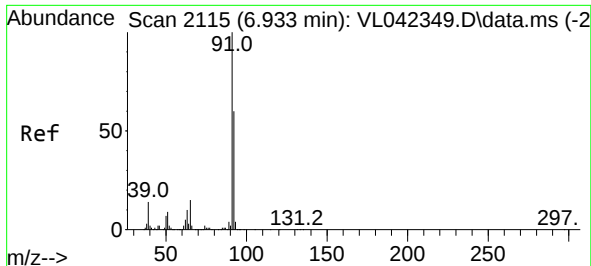
164 100

166 112.0 98.2 147.2

129 116.3 81.8 122.8

131 111.7 80.5 120.7

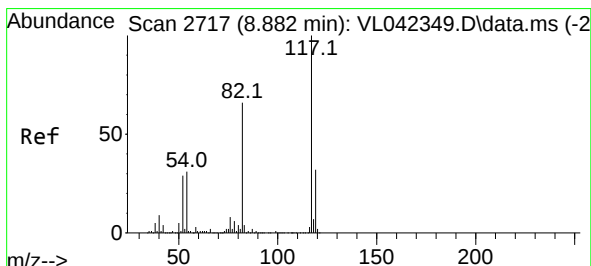
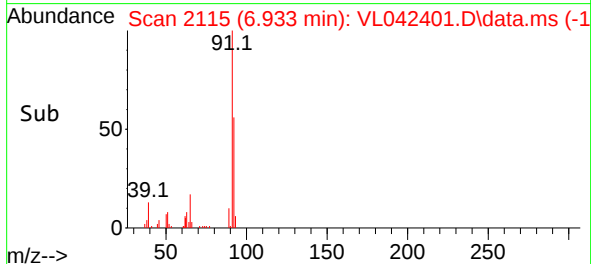
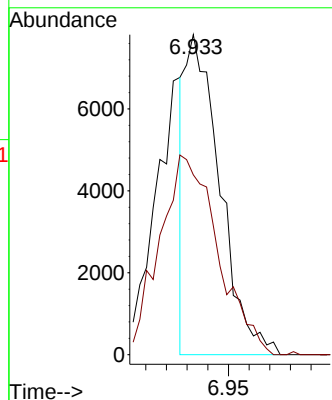
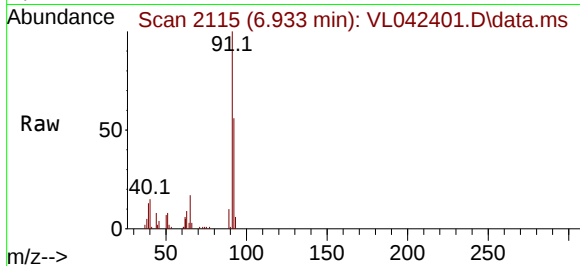




#53
Toluene
Concen: 0.208 ppbv
RT: 6.933 min Scan# 2115
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

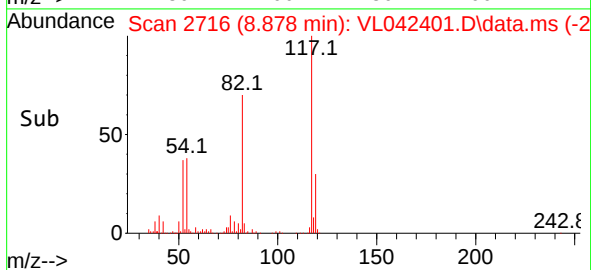
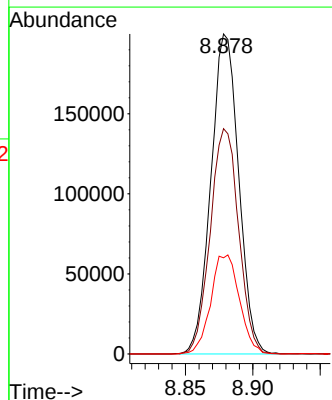
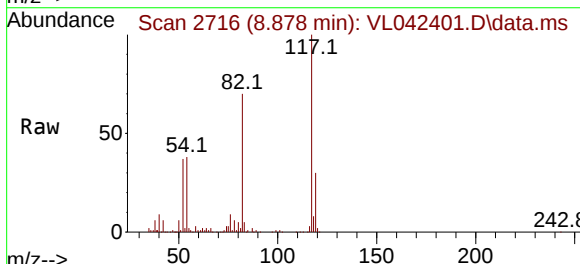
Instrument :
MSVOA_L
ClientSampleId :
SS3

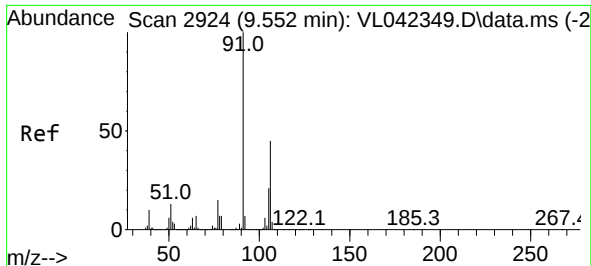
Tgt Ion: 91 Resp: 9102
Ion Ratio Lower Upper
91 100
92 107.0 48.2 72.4#



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.878 min Scan# 2716
Delta R.T. -0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 117 Resp: 286610
Ion Ratio Lower Upper
117 100
82 71.9 57.8 86.6
119 32.0 25.2 37.8





#59

m/p-Xylene

Concen: 0.066 ppbv

RT: 9.551 min Scan# 2924

Delta R.T. -0.000 min

Lab File: VL042401.D

Acq: 21 Apr 2025 12:51

Instrument :

MSVOA_L

ClientSampleId :

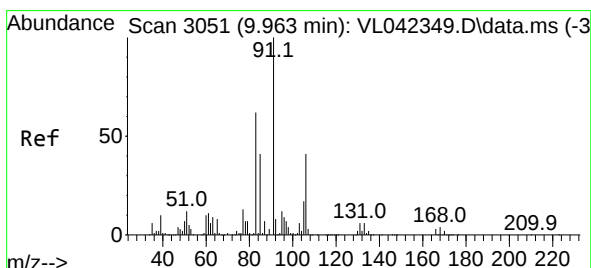
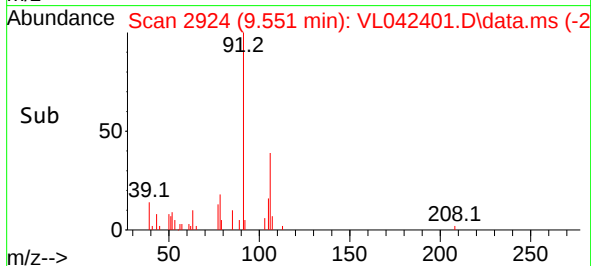
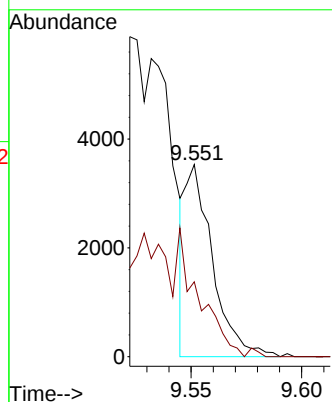
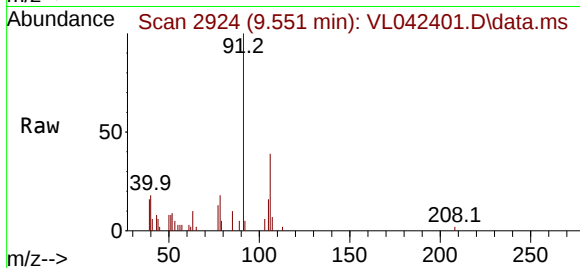
SS3

Tgt Ion: 91 Resp: 3030

Ion Ratio Lower Upper

91 100

106 150.2 35.4 53.2#



#60

o-Xylene

Concen: 0.112 ppbv

RT: 9.962 min Scan# 3051

Delta R.T. -0.000 min

Lab File: VL042401.D

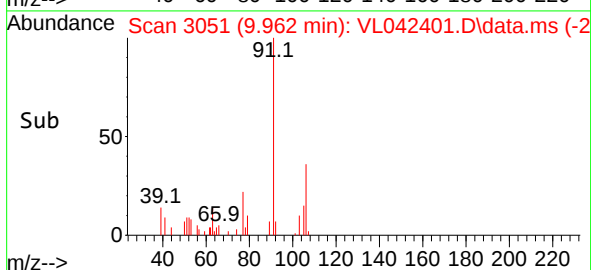
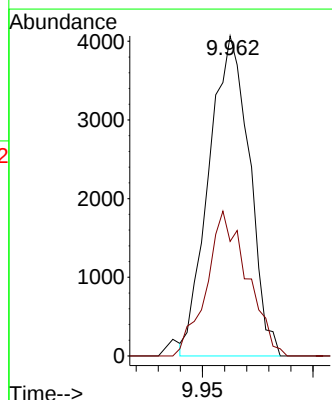
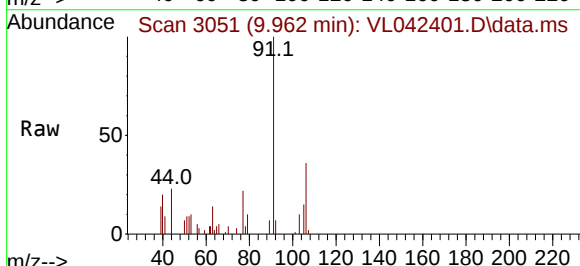
Acq: 21 Apr 2025 12:51

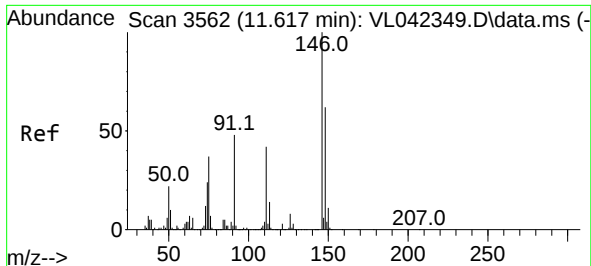
Tgt Ion: 91 Resp: 5177

Ion Ratio Lower Upper

91 100

106 45.5 21.1 63.4

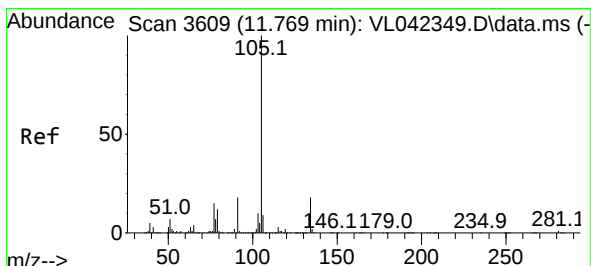
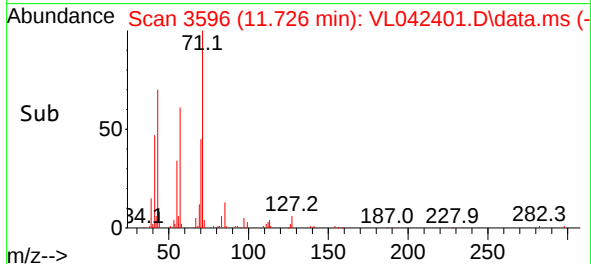
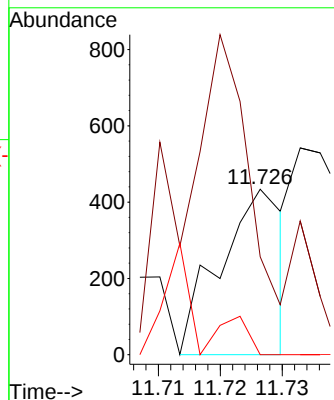
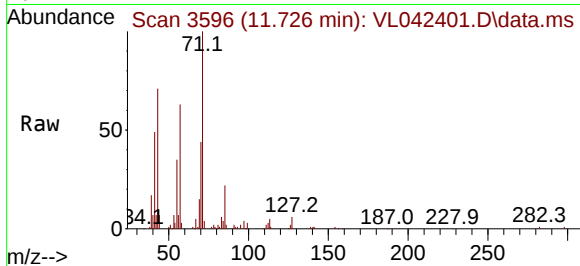




#66
Benzyl Chloride
Concen: 0.045 ppbv
RT: 11.726 min Scan# 311
Delta R.T. 0.110 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

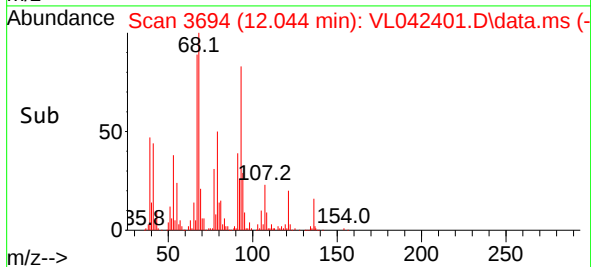
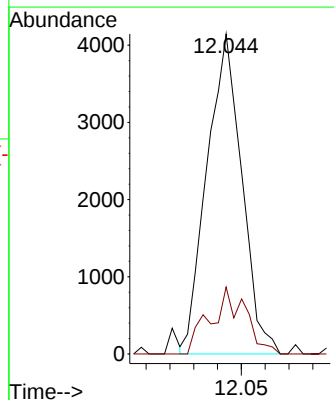
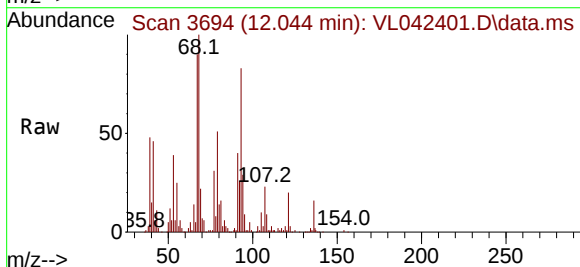
Instrument :
MSVOA_L
ClientSampleId :
SS3

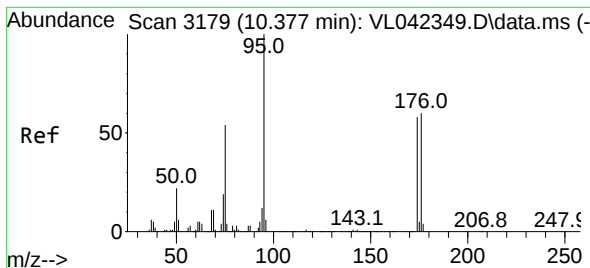
Tgt Ion: 91 Resp: 309
Ion Ratio Lower Upper
91 100
126 282.2 11.8 17.6#
128 43.7 4.5 6.7#



#67
sec-Butylbenzene
Concen: 0.049 ppbv
RT: 12.044 min Scan# 3694
Delta R.T. 0.275 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 105 Resp: 4216
Ion Ratio Lower Upper
105 100
134 20.9 14.6 21.8

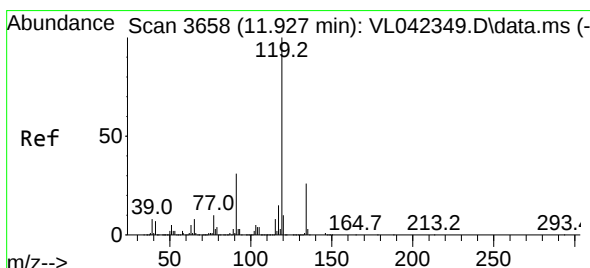
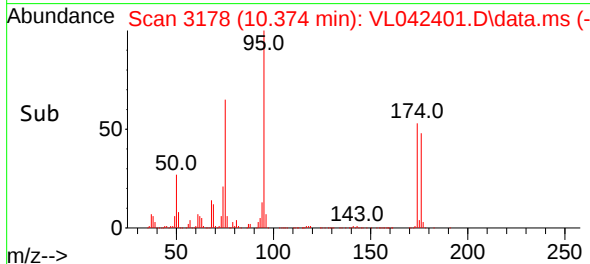
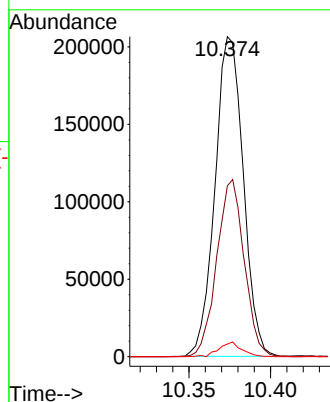
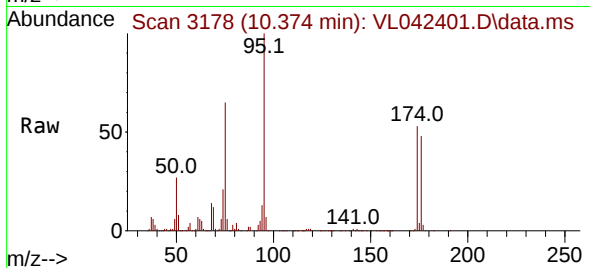




#68
1-Bromo-4-Fluorobenzene
Concen: 10.564 ppbv
RT: 10.374 min Scan# 3178
Delta R.T. -0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

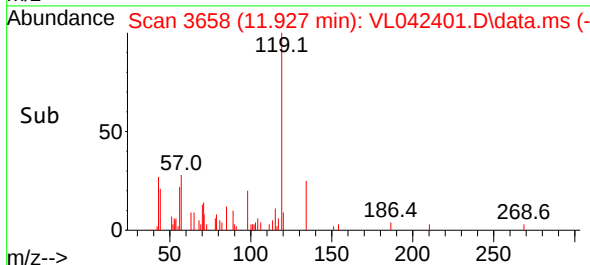
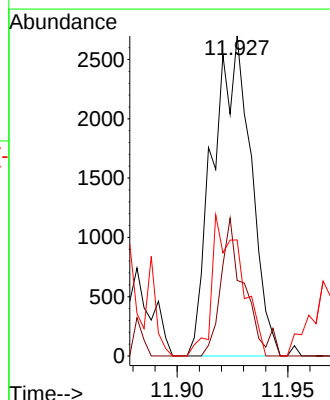
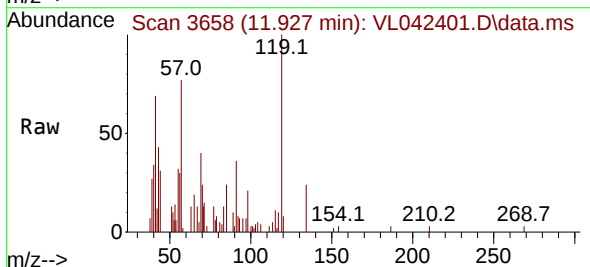
Instrument :
MSVOA_L
ClientSampleId :
SS3

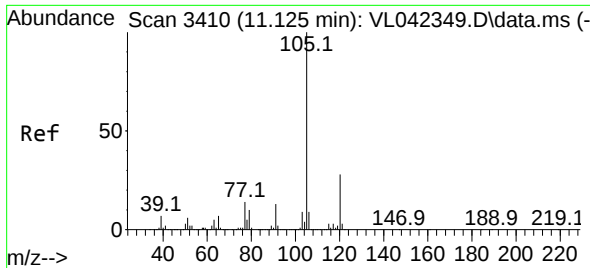
Tgt Ion: 95 Resp: 248812
Ion Ratio Lower Upper
95 100
174 53.8 48.5 72.7
175 3.7 3.7 5.5



#69
p-Isopropyltoluene
Concen: 0.043 ppbv
RT: 11.927 min Scan# 3658
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

Tgt Ion: 119 Resp: 3226
Ion Ratio Lower Upper
119 100
134 26.8 20.0 30.0
91 33.8 24.4 36.6

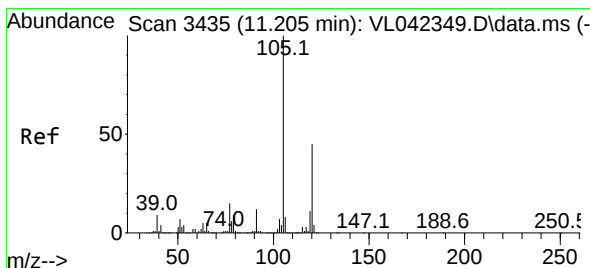
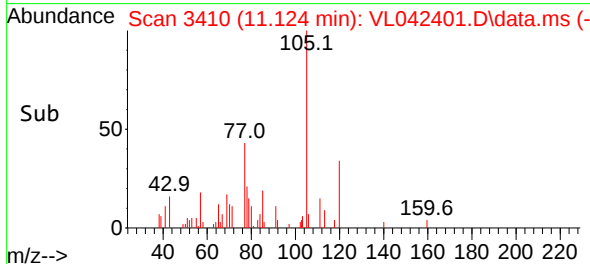
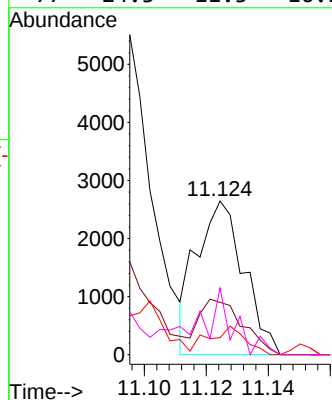
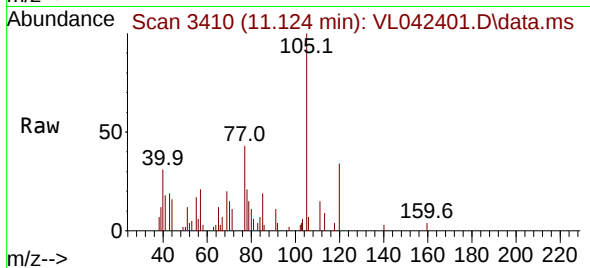




#72
4-Ethyltoluene
Concen: 0.050 ppbv
RT: 11.124 min Scan# 3410
Delta R.T. -0.000 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

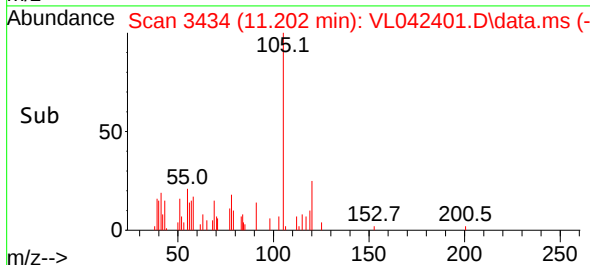
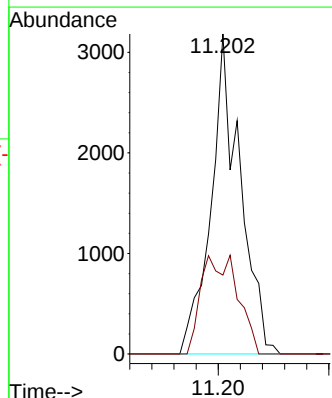
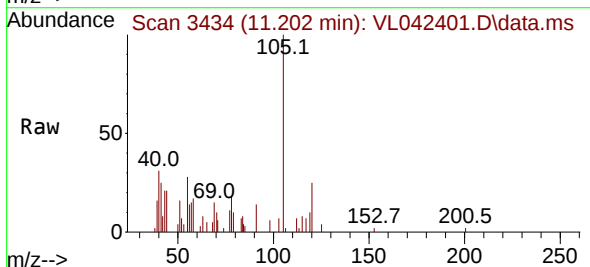
Instrument :
MSVOA_L
ClientSampleId :
SS3

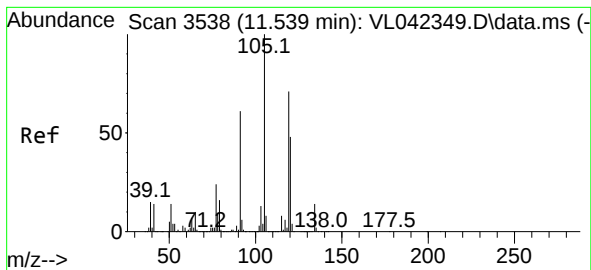
Tgt Ion:	105	Resp:	2805
Ion	Ratio	Lower	Upper
105	100		
120	32.7	23.2	34.8
91	0.0	10.4	15.6#
77	24.3	11.3	16.9#



#73
1,3,5-Trimethylbenzene
Concen: 0.059 ppbv
RT: 11.202 min Scan# 3434
Delta R.T. -0.003 min
Lab File: VL042401.D
Acq: 21 Apr 2025 12:51

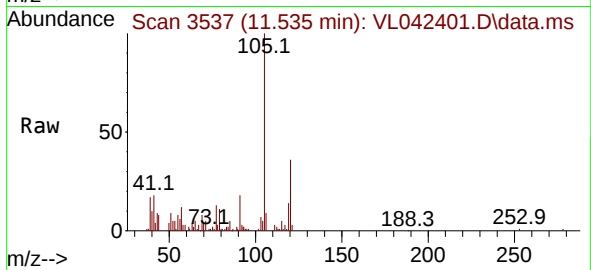
Tgt Ion:	105	Resp:	2911
Ion	Ratio	Lower	Upper
105	100		
120	24.7	35.6	53.4#





#74
 1,2,4-Trimethylbenzene
 Concen: 0.224 ppbv
 RT: 11.535 min Scan# 31
 Delta R.T. -0.003 min
 Lab File: VL042401.D
 Acq: 21 Apr 2025 12:51

Instrument :
 MSVOA_L
 ClientSampleId :
 SS3



Tgt Ion:	105	Resp:	13013
Ion	Ratio	Lower	Upper
105	100		
120	36.1	38.1	57.1#
91	17.9	48.8	73.2#
77	10.5	19.0	28.4#

